Claims

[c1]   What is claimed is:

1. A method of controlling a reset procedure for a radio communication link between a sender and a receiver comprising the steps of:

(a) the receiver transmitting at least a receiving status report to the sender;

(b) blocking the receiver from outputting another receiving status report to the sender for a first predetermined period of time, called P1 hereafter;

(c) the sender receiving at least one receiving status report sent from the receiver, determining that the receiving status report contains protocol error, transmitting a RESET PDU to the receiver, and starting a first timer for clocking a second predetermined period of time, called P2 hereafter;

(d) before the number of transmissions of the RESET PDUs reaches a predetermined value, called M hereafter, the sender outputting a RESET PDU to the receiver each time the first timer expires; and

(e) when the number of transmissions of the RESET PDUs reaches M and either the first timer expires or a RESET PDU is triggered to transmit by step (c), the sender de-

tecting an unrecoverable protocol error;

wherein P1 in step (b) is not less than the result of P2 multiplied by M.

[c2]   2. The method of claim 1 wherein step (b) further comprises utilizing the receiver to start a second timer for clocking P1 when a receiving status report is outputted from the receiver.

[c3]   3. The method of claim 2 wherein the second timer is a timer Timer_Status_Prohibit and the first timer is a timer Timer_RST according to a 3GPP specification.

[c4]   4. A method of controlling a reset procedure for a radio communication link between a sender and a receiver comprising the steps of:

(a) the receiver transmitting at least a receiving status report to the sender;

(b) the sender receiving at least a first receiving status report sent from the receiver, determining that the receiving status report contains protocol error, activating a reset procedure, and transmitting a RESET PDU to the receiver; and

(c) recognizing the reset procedure as ongoing before the sender receives a RESET ACK PDU outputted from the receiver;

wherein step (c) further comprises controlling the sender

to ignore at least a second receiving status report out-putted from the receiver when the reset procedure is on-going, wherein the second receiving status report is re-ceived later than the first receiving status report.

[c5]   5. The method of claim 4 wherein step (b) further com-prises utilizing the sender to periodically output a RESET PDU to the receiver according to a predetermined period of time before the number of transmissions of the RESET PDUs reaches a predetermined value and before the sender receives the RESET ACK PDU outputted from the receiver.

[c6]   6. The method of claim 5 wherein step (b) further com-prises utilizing the sender to start a timer for clocking the predetermined period of time when the sender out-puts a RESET PDU.

[c7]   7. The method of claim 6 wherein the timer is a timer Timer_RST according to a 3GPP specification.

[c8]   8. A receiver in wireless communication with a sender for transmitting at least a receiving status report, wherein the sender receives at least the receiving status report, transmits a RESET PDU to the receiver and starts a first timer for clocking a first predetermined period of time, called P1 hereafter, when determining that the receiving

status report contains protocol error, stores a predetermined value, called M hereafter and counts the number of transmissions of the RESET PDUs, wherein before the number of transmissions of the RESET PDUs reaches M, the sender outputs a RESET PDU to the receiver each time the first timer expires, and the sender detects an unrecoverable protocol error when the number of transmissions of the RESET PDUs reaches M and either the first timer expires or a RESET PDU is triggered to transmit;

the receiver comprising:

a communication interface for blocking the receiver from outputting another receiving status report for a second predetermined period of time, called P2 hereafter; wherein P2 is not less than the result of P1 multiplied by M.

[c9] 9. The receiver of claim 8 further comprises a second timer electrically connected to the communication interface for clocking P2, and the communication interface starts the second timer when outputting a receiving status report.

[c10] 10. The receiver of claim 9 wherein the second timer is a timer Timer_Status_Prohibit and the first timer is a timer Timer_RST according to a 3GPP specification.

[c11] 11. A sender in wireless communication with a receiver for receiving at least a first receiving status report sent from the receiver, the sender comprising:

a communication interface for activating a reset procedure and transmitting a RESET PDU to the receiver when determining that the first receiving status report contains protocol error; and

a decision logic electrically connected to the communication interface for recognizing the reset procedure as ongoing before the communication interface receives a RESET ACK PDU outputted from the receiver;

wherein the decision logic controls the communication interface to ignore at least a second receiving status report outputted from the receiver when the reset procedure is ongoing; wherein the second receiving status report is received later than the first receiving status report.

[c12] 12. The sender of claim 11 periodically outputting a RESET PDU to the receiver according to a predetermined period of time before the number of transmissions of the RESET PDUs reaches a predetermined value.

[c13] 13. The sender of claim 12 further comprising a timer electrically connected to the communication interface for clocking the predetermined period of time, wherein the communication interface starts the timer when out-

putting a RESET PDU.

[c14] 14. The sender of claim 13 wherein the timer is a timer Timer_RST according to a 3GPP specification.